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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,607	02/15/2006	Toshio Kiyokawa	TSU46	9164
20311 7590 11/21/2008 LUCAS & MERCANTI, LLP 475 PARK AVENUE SOUTH 15TH FLOOR NEW YORK, NY 10016				
EXAMINER				
PAK, HANNAH J				
ART UNIT		PAPER NUMBER		
1796				
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11/21/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/568,607

Applicant(s)

KIYOKAWA ET AL.

Examiner

Hannah Pak

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☐ Claim(s) _____ is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1. All outstanding rejections, except for those maintained below, are withdrawn in light of applicants' amendment filed on 08/25/2008.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.
3. The new grounds of rejection set forth below are necessitated by applicants' amendment filed on 08/25/2008. Claim 1 has been amended to recite that the amount of the double oxide present on the surface of the magnesium oxide powder is 5-50 mass%. This element was presented in original claim 4 and claim 4 has been canceled. Claim 6 also has been amended to recite the amount of the double oxide and the spherical shape factor as in the amended claim 1 and clarify the fusing treatment is on the surface. Claim 9 has been amended to clarify the fusing treatment is a flame fusion process on the surface. Claim 14 is rewritten from amended claim 1 to more specifically recite the magnesium oxide powder. Claim 15 is rewritten on the subject matter of amended claim 6, which clarifies that the fusing process is at a temperature higher than the melting point of said double oxide. Hence the final is warranted and is proper.
4. Applicants have amended claim 5 to correct the typographical errors. In addition, claim 8 has also been amended to correct similar typographical errors. Thus, the claim objections are withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 15 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The phrases, "magnesium oxide powder [with or comprising] sphere-shaped coated particles," recited in claims 14-15, fails to satisfy the written description requirement of 35 USC 112, first paragraph since there is no support for these phrases in the application as originally filed, see MPEP § 2163. While there is support for "sphere-shaped coated magnesium oxide powder" or "magnesium oxide powder shaped into sphere" on page 6, lines 20-30 in the specification, there is no support for the same magnesium oxide powder containing sphere-shaped coated particles. Accordingly, these phrases are not reasonably conveyed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-10 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toshio et al. (Machine Translation of JP 2003-034523) in view of Miyata et al. (US 5,039,509).

The rejection is adequately set forth on pages 3-4 of the Office action mailed on 05/28/2008 and is incorporated here by reference.

Regarding the newly added method claim recited in claim 15, Toshio et al. teach the advantages involved using its method to produce the double oxide coated magnesium oxide, such as excellent moisture resistance and excellent dispersibility in resins (Paragraph 10). Toshio et al. also disclose mixing the double oxide (silicon dioxide) in the claimed amount with magnesium oxide powder to cover its surface at a high temperature of 1473-2073 K (Paragraphs 12 and 17). Moreover, Miyata et al. also teach the fusing step of the double oxide surface layer with high temperature, which comprises a combination of mixing and firing at a temperature of 1,000 to 1,600 degrees Celsius, for the purpose of improving dispersibility of the sphere-shaped coated magnesium hydroxide in resins (Col. 3, lines 5-32 and Col.4, lines 53-67).

7. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toshio et al. (JP 2003-034523) in view of Miyata et al. (US 5,039,509) as applied to claims 1-10 and 13-15 above, and further in view of Anabuki et al. (Machine translation of JP 06-171928).

The rejection is adequately set forth on page 5 of the Office action mailed on 05/28/2008 and is incorporated here by reference.

Response to Arguments

8. Applicants' arguments filed 08/25/2008 have been fully considered but they are not persuasive. Specifically, the applicants appear to argue that **A)** Miyata et al. and Toshio et al. would have not suggested forming the coated magnesium oxide product in the form of a spherical shape (see Page 10 of the Applicants' Remarks). The applicants also argue that **B)** Miyata et al. do not teach the claimed amount (5-50 mass %) of coating of the magnesium oxide particles (see Pages 10-11 of the Applicants' Remarks). Moreover, the applicants argue that **C)** Toshio et al. and Miyata et al. do not teach a method for forming double oxide spherical surface layer (see Pages 11-14 of the Applicants' Remarks). More particularly, they argue that Toshio et al.'s method is cited in the specification of the present application as an old art, and that there is no teaching or suggestion in Miyata et al. on a step of fusing the double oxide surface layer with a high temperature to render the particle surface spherical.

With respect to argument **A)**, as indicated in the prior office action, there is an ample reason or motivation to employ spherical magnesium core which is to be coated by the double oxide (silicon dioxide). Therefore, the references, Miyata et al. and Toshio et al., as a whole would have suggested forming the spherical shaped double oxide coated magnesium oxide. One of ordinary skill in the art would have reasonably expected that a thin coating of double oxide coating on the spherical surface of the

magnesium oxide core would not alter the spherical shape of the magnesium oxide core.

With respect to argument **B)**, obviousness is determined based not on whether Miyata et al. teach or suggest the claimed amount of double oxide coating, but on whether the combined teachings of Toshio et al. and Miyata et al. would have fairly suggested the claimed amount of double oxide coating to a person of ordinary skill in the art, see MPEP. As indicated in the previous office action, Toshio et al. teach the advantages of employing, among other things, the claimed amount of coating (Paragraphs 10-11 and 15). Furthermore, nowhere do Miyata et al. discourage one of ordinary skill in the art from employing the amount of the double oxide coating taught by Toshio et al.

With respect to argument **C)**, Toshio et al. teach the advantages involved using its method to produce the double oxide coated magnesium oxide, such as excellent moisture resistance and excellent in the dispersibility to resin (Paragraph 10). Moreover, Miyata et al. teach the fusing step of the double oxide surface layer with high temperature, which comprises a combination of mixing and firing at a temperature of 1,000 to 1,600 degrees Celsius, for the purpose of improving dispersibility of the magnesium hydroxide in resins, such as those taught by Toshio et al. (Col. 3, lines 5-32 and Col.4, lines 53-67).

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hannah Pak whose telephone number is (571) 270-5456. The examiner can normally be reached on Monday - alternating Fridays (7:30 am - 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hannah Pak
Examiner
Art Unit 1796

/HP/

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796